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CENTRAL INTELLIGENCE AGENCY
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CONVERSION OF SOVIET ECONOMY TO PRODUCTION FOR MILITARY USE*

I. STATEMENT OF PROBLEM

To estimate the current extent of conversion of Soviet industry and other economic resources to production for military use.

II. SUMMARY AND CONCLUSIONS

1. Soviet Orbit.

Conversion of industry and other economic resources within the Soviet orbit has been under way since the latter part of 1948. Evidence indicates the acceleration of this conversion in 1949 and 1950 with a wider variety of military items of newer design started into production.

2. USSR.

The USSR has been producing substantial quantities of war material since the end of World War II. Beginning in the latter part of 1948 there was a noticeable acceleration in munitions production, marked by the partial reconversion of plants which had been producing non-military equipment since 1945. This upswing continued at an increasing rate in 1949 and 1950.

3. Satellites.

The extent of conversion from civilian to military production is more clearly evidenced in the Satellites than in the USSR. A considerable expansion, under Soviet direction, of munitions-producing capacity occurred

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in 1949, with numerous indications that this program was to have been completed by the second half of 1950. There is scarcely a major industrial installation of any Satellite which is not producing military items or equipment for the direct support of military production.

III. DISCUSSION

1. USSR.

Following World War II the USSR never fully converted to the production of peacetime, or civilian, goods. Although emphasis was placed on the production of capital equipment for the restoration of the war-ravaged economy, the Soviets through 1946, 1947, and 1948 continued to turn out bombs, shells, and other ammunition, as well as aircraft, tanks, and armored vehicles. It should be kept in mind, however, that the difference between a wartime and a peacetime Soviet economy is considerably less than in the US. Even under strictly peacetime conditions, the Soviets would place at least the main emphasis on heavy industry and capital expansion at the expense of consumer goods.

Much of the munitions effort of the USSR in 1946, 1947, and 1948 was devoted to research and development of atomic weapons, guided missiles, infra-red equipment, and other new weapons. Considerable work was also done in overhauling and modernizing such important weapons as the T-34/76 tank, which has been converted into the T-34/85. This program, involving the modification of thousands of tanks produced during and immediately after the war, occupied a considerable portion of Soviet tank production capacity.

During the latter part of 1948 the Soviets, with much of the development and modification work completed, began to tool up for the mass production of new types of weapons and at the same time to increase their production of standard types. Available evidence indicates that this program was getting well underway by mid-1949, when a majority of the German PW's were returned home. (It is significant that those PW's remaining in the USSR were, almost without exception, removed from production shops by September 1949 and placed on labor details.) Many of these PW's have reported that prior to their departure they observed various indications of preparations for expansion of war production. New plant buildings were constructed to accommodate production of equipment much heavier than needed for the alleged products of the plants. Fifty-ton to 100-ton cranes were installed in tractor plants where 10-ton cranes would have been sufficient. New munitions-producing machinery was installed. Old munitions-making machinery used during World War II was brought from the plant warehouses and reinstalled in machine shops. High-ranking officers of the Soviet armed forces made thorough inspections of these various plants.

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A few PW's, but only a few, have given us some information on conditions in early 1950. The few reports received from other sources in 1950 have indicated that the acceleration of munitions production continues unabated, but there is certainly not enough recent information on the USSR on which to make reasonable estimates.

There are, however, no indications of total conversion to war production within the USSR. Total conversion is unlikely to occur before the beginning of a general war, one reason being the urgent need for capital equipment to support a war economy. There are also certain civilian items such as tractors and road-building equipment which have important military uses. Another aspect of the problem is that the USSR has been producing munitions consistently and on a sufficient scale to enable the Soviet Government to build up large stockpiles of war materiel which are probably adequate to carry through the initial stages of an all-out war.

2. Satellites.

The Soviets are limiting the design, development, and production of the Satellites to those items desired by the Soviets themselves, and they have gone so far as to halt development of Czech designs for tanks and other weapons for fear of production delays. It is also apparent that Moscow does not approve of any Satellite becoming self-sufficient in producing weapons or ammunition. Primarily the Satellites are producing Soviet tank parts, gun tubes, ammunition, aircraft parts, and naval vessel parts and equipment.

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NOTES ON CONVERSION TO MILITARY PRODUCTION IN THE SOVIET ORBIT

USSR MINISTRIES

The 1950 trend in the USSR has been toward splitting economic ministries, and in the case of two, the Ministry of Timber and Paper Industry and the Ministry of Metallurgical Industry, the reorganization both restored their wartime organization and presaged a trend toward a wartime practice--that is, direction of a government agency by a Deputy Chairman of the USSR Council of Ministers.

TRANSPORTATION

Most of the development in transportation within the Soviet orbit appears to conform to the general pattern of economic expansion. However, several specific measures, which may be merely precautionary, do have positive military significance: (a) an intensive program of airfield construction and development sponsored by the USSR throughout China and in East Germany, which greatly exceeds any conceivable civilian requirements; (b) some reduction in Soviet production of civil transport aircraft and conversion of some plants to production of jet fighters; (c) Soviet construction of civilian motor vehicles to military specifications and measures in the Eastern European Satellites to permit rapid conversion of motor vehicles to the use of substitute fuels.

METALS AND METAL WORKING

Information indicating conversion of metals and minerals in the USSR is scanty and inconclusive. However, considerable data are available on the Satellites, and some examples are quoted below:

Czechoslovakia.

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indicates that, in addition to the Soviet's "heavy hand" in the training and organization of the Czech army, there has been a considerable increase in Soviet demands on and control of the Czech economy. The increased production of heavy industry is the main Soviet objective, with the resultant de-emphasis of agriculture and consumer industries. Farmers' cooperatives have been accelerated to make additional farmers available for industrial labor. At an economic meeting of Czech ministers in Moscow, they were told that the rate of development of heavy industry was unsatisfactory and were ordered to raise the number of men employed by heavy industry by 300,000 before the end of 1950. This makes an Arbeits-Einsatz of the German war model a probability. Women are to be sent to the factories by the Council of Women, whose representatives are to call on families and investigate whether the women in the households can free themselves for factory work. Young children will be cared for in nurseries and kindergartens. S.

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[REDACTED] On orders of Moscow, Czechoslovakia has inaugurated a new program for heavy industry. The Ministry of Industry has issued directives to all nationalized plants to halt the production of lighter-type goods. As a result, wherever machine tooling is suitable to heavy-type production, the nationalized plant must convert to the production of heavy goods. Where present machinery is not adaptable, production must be stopped. This latter alternative is for the purpose of channelling Czechoslovakia's limited raw materials into heavy industrial output. The effect of the increased emphasis on production of heavy goods has already begun to be felt. In January 1949 a shifting of labor to plants converted to heavy industry got under way. S.

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[REDACTED] Information as of November 1949. Horovice foundry and iron works at latitude 49°50' N-longitude 13°58' E. Production: Plant produces steel girders for bridges. Also produces gun carriages for cal. 10 to 15-cm. guns at rate of 10 to 15 per month. Seventy percent of production goes to the USSR. S.

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[REDACTED] Olomouc plant of Moravian Iron and Steel Works produces caterpillar tracks for military vehicles of all kinds, crank shafts for automobiles, axles for railroad cars, and various automobile parts. S.

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[REDACTED] Poldi, a subsidiary of United Steel works, produces among other things, armor plate, tank bodies, machine guns, and rifle barrels. Head of the rolling mill and armor plate departments is Dr. Ing. Danhelka; Col. Lipka is the military supervisor. Armor plate department employs 650 men on a three-shift basis.

All types of armor plate as well as armored tank bodies are produced in the rolling mill at Poldi. Completed tank bodies are sent to Boleslav-Mlada (presumably Skoda-Asap Auto Works) by rail. Tank armor plate production began in July 1950.

Press Shop I, equipped with 10 presses, produces, along with Forge Shop III, gun barrels of all calibers. Each press is capable of producing 8 to 10 barrels per shift, all believed to be shipped to the USSR. Forge Shop II, with 6 forges, manufactures rifle and gun barrels at the rate of 500 per shift. These are shipped unfinished.

Forge Shop I is welding armored car bodies, three shifts. Exclusively military production. S.

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[REDACTED] Soviet commissions frequently visit Skoda-Plzen. This fact, as well as their work in the design office of the arms department, is kept secret. S.

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[REDACTED]

Soviets placed a rush order with Skoda-Plzen for 40,000 tank treadlinks and that the only new arms production at that plant is the finishing of a Soviet order for 50 large-caliber railroad guns by the end of 1948. On completion of this order, remaining armament machinery was to have been moved to Moravia. Continued evidence of construction of Skoda plants at Adamov and Dubnica indicates that these plants will be chief armament works under the new Five-Year Plan. S.

Hungary.

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[REDACTED] Measures for Increasing the Production of Iron and Steel.

Between 20 and 22 December 1950 the Hungarian Ministry of Heavy Industry held secret meetings with the directors of the iron and iron products factories. The purpose was to have the directors increase once again the production of their plants. The following decisions were made: (a) factories must operate on three shifts instead of two; (b) workers must be put under military discipline; (c) output must be checked each day to see that production conforms with set plans; (d) as of 1 January 1951, 85 percent of the factories' output will be reserved for military needs; (e) factories producing military optical appliances will produce solely for the General Staff; (f) every one of the country's iron plants will be supervised by a commission of Soviet controllers. S.

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[REDACTED] MAVAG Iron and Steel, at Diosgyor, Hungary.

Production: Plants A and B produce AA shells of 80 and 88-mm cal.; ammunition for 76-mm Gun M 1942 and for 82-mm mortars; ammunition for 7.62-mm PPSH Tommy guns and for Maxim heavy machine guns; Tokarev infantry rifles and PPSH Tommy guns; complete 76-mm guns M 1942; complete 82-mm mortars M 1941; and complete Maxim heavy machine guns. In addition, the following items are also produced: caterpillar traction mechanism and other parts for the assembly of the T-34 medium and JS tanks without motors. 95 percent of ammunition and arms produced is shipped to the USSR. C.

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[REDACTED] MAVAG Iron and Steel Plant at Diosgyor, Hungary. Production of the "new factory": lathes, wheels and axles for railroad engines and cars, parts for railroad engines. Heavy gun barrels are produced in the FT (Futalep--main plant). Barrels for 40, 60, and 80-mm guns are manufactured in this section, which are finished in the large workshop of the main plant. Artillery ammunition is produced in a restricted area bearing the code name "Asia."

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Poland.

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[REDACTED] **Armaments:** In 1949 SZYR announced that in connection with an agreement with the USSR, the Polish army would be supplied with heavy armaments and equipment by the Soviets and that no heavy armament would be produced in Poland - only machine guns, hand weapons, anti-tank weapons, light anti-aircraft guns, tracer ammunition, etc.

Production of tanks would take place in the USSR while parts for tanks would be produced in Poland -- at Batory, which was supposed to make steel plate and armor plate. S.

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[REDACTED] As of July 1950. 25X1A
Production and Personnel at the Stalowa Wola Steel Works.

... The mechanical section is planned to be expanded in order to include the production of armaments. At present a secret construction section, which is a sub-section of the mechanical section, is engaged in remaking drawings of German artillery weapons; no production has yet been started. In preparation also are sites for types of "snybowe" furnaces to be used in treating gun barrels....

The steelworks have produced castings of artillery components out of 18 tons of chrome-nickel steel. Four of these are ready for processing following homogenisation. Since the middle of May the force has been working at top speed on the production of matrixes for artillery components. A special military representative at the works supervises the delivery of the material.

Rumania.

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[REDACTED] A Military Directorate has been attached to the Rumanian Ministry of Production, such as metallurgy, the chemical industry, light industry, agriculture, and the food and oil industries.

This Military Directorate, which apparently performs military supply functions, works secretly. It receives orders directly from the Ministry of Armed Forces, bypassing the production ministries to which it is attached. S.

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[REDACTED] Each of the steel works at Hunedocero is now under the control of 5 to 10 Soviet officials. Their products are shipped to the USSR. Plants at Cugir and Resita have already been put under Soviet control. Both plants specialize in the manufacture of munitions and heavy armament. S.

USSR.

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[REDACTED] The former Stalin Works, near the Sea of Azov, which used to fabricate combines, has been turned over to the Red Army. Near the northern edge of Tanganrog

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is a second large factory, called "Andrews" (Andreyev Steel Plant), which has also been converted to war production. S.

CONSTRUCTION AND ROAD-BUILDING MACHINERY

Lack of evidence of conversion is not a negative indication of Soviet intentions. Military requirements include the need for construction and road machinery. Therefore, it is highly improbable that plants specifically tooled and geared to the production of such essential equipment would be converted to the production of armament and military machines.

FOOD AND AGRICULTURE

Since the beginning of 1950 the USSR has been tightening its control over agricultural production by the consolidation of two or more collective farms into larger units, thus facilitating the procurement of food and raw material supplies in time of war and releasing additional manpower (more than two million) for the armed forces and industry. Apparently, ex-army officers are being placed as managers of these consolidated collectives as far as possible. Private slaughter of livestock is being restricted. In the Eastern European Satellites, China, and Manchuria collectivization is being speeded.

Grain, canned livestock products, and fibers are being stockpiled in the USSR, and food in the Soviet Zone of Germany. There is no evidence of unusual stocks of foods or fibers being accumulated in the Eastern European Satellites, China, or Manchuria.

TRADE AND FINANCE

Financial and commercial policies and practices of the USSR point strongly toward general diversion of plant production, manpower, raw materials, and financial resources to military production. This trend has been in evidence for the past five years and seems to have been progressively intensified since 1948.

Soviet import policy has concentrated on the acquisition of industrial equipment and raw materials and has shown complete lack of interest in the manufactured consumer goods.

Soviet trade agreements with the Satellites have brought about re-orientation of Satellite industries toward production of capital goods and away from consumer goods industry.

In the financial field the USSR admittedly allocated during the 5-year period of 1946-50 about 364 billion rubles for direct military expenditures (excluding hidden expenditures of military and para-military nature), as compared with 150 billion rubles for the period 1936-40 or with 550 billion rubles for the five war years of 1941-45. During the

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1946-50 period the USSR was therefore allocating funds for military purposes amounting to 66 percent of the all-out military expenditures during 1941-45 and 2½ times those spent during 1936-40.

Budgetary allocations for capital investment have increased from 44 billion rubles in 1946 to 106 billion rubles in 1950, as contrasted with the total capital investment during five war years of 95 billion rubles (excluding evacuation costs of industry).

The fact that the national consumption in the USSR lags extremely far behind the national income and rate of capital investments as a whole strongly suggests that mobilization of economic resources for war potential has been going on. While investments and national income of the USSR have increased considerably during the five postwar years, the appalling lack of civilian consumer goods is continuing. This leads one to the conclusion that a Government Planning Board has been directing a greater and greater part of the increasing national income to the military industrial plants and simultaneously mobilizing the facilities of civilian production plants for military purposes.

ELECTRIC POWER

The electric power industry in the Soviet bloc shows no reliable indications of the conversion of industrial plants to military production.

MANPOWER

Recent trends in manpower policy in the Soviet orbit include growing emphasis on recruitment and training of additional manpower for heavy industry, increased utilization of women and youths in the labor force, and the transfer of administrative and other non-essential personnel to more productive employment. These developments may, but do not necessarily, indicate acceleration of the process of conversion to military production. They may be only part of the pattern of expansion of industrial facilities and production.

PETROLEUM

It is indicated that the oil industry of the Soviet orbit has been converted to the production of increased quantities of products required by the military. Actions have been taken which would be expected in conversion of the industry to war production. There is insufficient evidence to determine whether or not the industry is completely mobilized for war.

A shift in refining schedules apparently took place in 1950, resulting in increased production of diesel fuel and jet fuel. Efforts to increase high octane aviation gasoline have continued, with increased emphasis placed on this product in the Soviet Zone of Germany and Czechoslovakia. It is reported that in the oil fields in the Baku area pumps are being placed underground or otherwise protected from air attack.

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Severe rationing was instituted in the Satellites in 1950 and 1951, and there is evidence of some conversion of motor vehicles to substitute fuels such as bottle gas. Forced sale of private vehicles in Hungary will further reduce civilian consumption.

A severe shortage of drums has developed in the Orbit, and it is indicated that efforts have been made to increase production in both the USSR and the Satellites. In the Eastern European Satellites there has been a drive to collect all drums from private sources.

Stockpiling has been widespread. Numerous depots have been established in the Satellites and reportedly filled to capacity. There is considerable evidence of establishment of stocks in drums in the Satellite areas.

The oil fields of Rumania have been declared a military zone. The number of guards in the Austrian oil fields and refineries was increased during the latter part of 1950.

COAL

Actions have been taken in the Soviet orbit which would be anticipated in the conversion of the economy to war production. However, there are no firm indications that the coal industry has converted to a wartime basis. Coal is not considered a sensitive indicator in this respect.

ENGINEERING INDUSTRY

USSR.

Production of munitions has continued since the war, parallel to production of non-military equipment. Emphasis in the 1946-48 period was on the manufacture of equipment for rebuilding the Soviet economy, but reconditioning of World War II equipment as well as the construction of new armaments continued unabated, though on a reduced scale, in both regular armaments plants and in civilian machinery-producing installations. In the latter part of 1948, several agricultural machinery plants, which had fully converted to peacetime production in 1946, resumed the manufacture of ammunition. The electro-technical industry, which in 1948 was devoting 80 percent of its capacity to military electronics, underwent expansion in 1949 and 1950. Concurrently the stockpiling of special critical production materials and of finished military electronics products was taking place. Similarly, the optical instrument industry with the assistance of Zeiss technicians and equipment has since 1948 been directing the major share of its capacity to military items. Locomotive and railway car plants, as well as two large tractor plants have been producing tanks uninterruptedly since the war, and in 1949 and 1950 began production of new models. The two largest metallurgical equipment manufacturing plants have been turning out large guns in addition to their regular machinery output.

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Czechoslovakia.

In 1949, many conversions to armaments production occurred, and the most important munitions producers expanded their production of military items. In 1950 expansion continued with the placing into production of new calibers and new types of weapons. The plants of the Skoda national enterprise have increased their output of heavy weapons, CKD plants are producing tank engines and components, and Zbrojovka Brno plants have accelerated small arms production. In the field of electronics, work on military orders increased in 1950.

Hungary.

A large increase in military production, similar to that in Czechoslovakia, took place in 1949 and showed further acceleration in 1950. A large part of the production is for the USSR, with the remainder going to the other Satellites and the Hungarian army. More than 30 plants have reorganized in order to convert a large part of production capacity to military items. Tanks are reportedly being produced in three plants in departments which had previously produced agricultural machinery. Two large steel plants have added machining facilities for gun barrels and have increased output of armor plate as well as steel for weapons. At least 15 plants are producing military instruments, delayed fuses, incendiary bombs, armor-piercing shells, and other ammunition. Two plants are producing military radios and telephones.

Soviet Zone, Germany.

In the latter part of 1949 and extending into 1950, the Soviets took steps to strengthen Soviet Zone industry along military lines. The present expansion of industry has as one of its driving motives the supply of heavy equipment for Soviet armament plants. Through 1950 the production of components for weapons and items such as marine diesel engines and large vertical boring machines of a quasi-military nature have been stepped up. The electronics industry has concentrated increasingly upon military orders, and instrument plants, such as Zeiss Jena, have extended both range and rate of military production. Soviet supervision of Soviet Zone plants and control of their output has been tightened.

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